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Growth of American Families

Most American families are planned. Parents try to have just the number of children they want and plan the timing of many of the births. In fact, family planning seems to be almost universally accepted, irrespective of religion, income, education, residence or occupation.

Barring a major depression, which would certainly reduce the current high birth rate, population will continue to grow rapidly in the United States for at least a few decades ahead because two to four children seems to be thoroughly entrenched as the ideal family. There will be relatively few childless and one-child families and families of six or more children. The "cheaper-by-the-dozen" sized family will be even rarer than it is today.

These and many other important facts which reveal what the nation's future fertility pattern may be are reported in an important volume entitled *Family Planning, Sterility, and Population Growth.* This represents the findings of a comprehensive survey conducted by a team of highly skilled social scientists: Ronald F. Freedman of the Survey Research Center at the University of Michigan, Pascal K. Whelpton and Arthur A. Campbell of the Scripps Foundation for Research in Population Problems at Miami University.

This nation-wide survey queried 2,713 white wives, 18 to 39 years old, selected so as to represent accurately the 17 million white wives of that age in the population.

Questioned on past childbearing and future expectations, the wives expected, on the average, a total of between 2.7 and 3.3 births, with 3.0 the most probable number. When couples expect fewer than two children, it is usually because either the husband or wife suffers some form of impairment to the reproductive system.

Only 7 percent of the wives expected six or more children; so the proportion of large families will *not* increase. Rather, the two-, three-, or four-child family will continue to be the norm. Many wives who already had more than four children reported that the excess was unintentional.

Should the birth expectations of these young wives be realized, their fertility pattern will match that of their grandmothers rather than that of their mothers. White women born between the years 1886 and

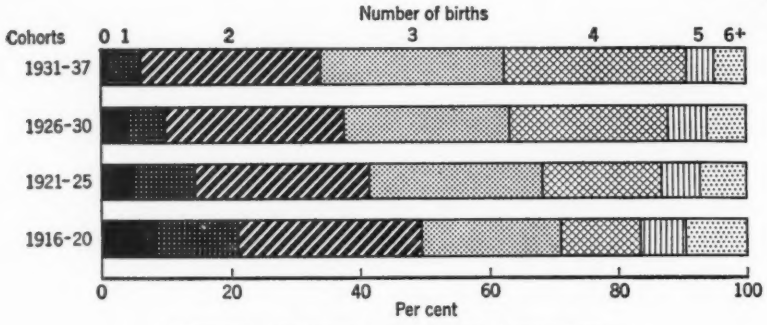

*FIGURE 1: CHANGING PATTERNS OF FAMILY SIZE

Percent distribution by most likely number of births expected, for wives, by cohorts. The wives born in the years 1916-20 are now 40-44 years old; their expectations have been largely realized. Some of the younger women will change their expectations as they gain experience in rearing a family. More will be childless or have only one child because of sterility, and more will be in the 6+-child group because of unwanted pregnancies.

1890, who married before middle age, averaged 3.2 children. Those born between the years 1906 and 1915 averaged only 2.4 children. But the wives born during 1926-37 think they will have between 2.8 and 3.4 children.

What does the "fraction of a child" so dear to the demographer's heart mean in terms of national growth? If married women have an average of three children during their reproductive years, it is estimated that the population of this country will increase from 180 million in 1960 to about 600 million by the year 2050. But if they average 3.3 children, population will reach the billion mark by that time! These projections assume that people will live only a little longer than they do now.

The birth expectations revealed in the study indicate that, while traditional differences still exist in the size of *completed* families, they are not as great as suggested by annual birth rates in the 1930's. The rather pronounced income, occupation and residence differentials so prevalent throughout the population seem to be decreasing more rapidly than the religious and educational differentials. The last two will undoubtedly be the major influences creating birth differentials in the future generations.

Members of the Roman Catholic faith expect to have larger families (3.4 children) than non-Catholics (2.9 children). Differences of this type are found within all socioeconomic groups. The expectations of Catholic women living on farms top all others (4.4 children). Jewish wives born during 1916-20 ex-

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pect to have fewest births (1.8). Wives in each religious group who are in their late thirties and who have worked five or more years expect a total of only 2.1 births.

Traditionally, the more education American women have had, the fewer the children. The survey reveals that Protestant wives who are high school graduates or who have gone on to college expect an average of 2.7 children. Those who did not go beyond grade school expect 3.6 children.

However, among Roman Catholics, the college wives lead all others, expecting 3.9 children. High school wives expect 3.3 children and grade school wives, 3.7 children. Each group includes the wives who started grade school, high school or college, but did not graduate.

With respect to residence, the only clear expectation differential is that between farm wives and other wives, and this could be more closely related to education than residence because farm wives tend to have less education. Education could also be the dominant factor in the birth expectation differentials noted for income and husband's occupation.

Paid employment seems to be the leveling influence in family size. Among fecund wives (those who could have many children) in their thirties who have worked over five years, both Catholics and Protestants expect to have only 2.5 children. Some wives work instead of having more children because they prefer working to housekeeping. Other wives work because they are unable to have any children, or more than one or two.

The study assumes that the timing of expected births will follow the pattern set in this present era of early marriage. Wives will continue to have their children earlier and closer together than did their parents.

Census Bureau data for 1959 reveal that the median age of the mother at the birth of the last child was under 30 years! In other words, the awesome responsibility of bearing children will rest increasingly on young people in their late teens and early twenties.

This timing also means that most of the wives will be grandmothers at 47. Their children will have left home. Will they turn to employment to fill their idle hours? With no job experience prior to marriage, what will their chances be?

The ever-changing fertility pattern of American women is the most important clue to the size and age structure of the nation's future population. At present growth rates, population will double in 40 years.

The United States has not yet caught up with its 40 million increment in population during the last 15 years. Therefore, how can the prodigious population inflation in store to the end of the century be accommodated without weakening the basic social and economic structure of the nation?

This growth will create new problems and compound many others now pressing for solution. Unless they are faced and solved now, national development will be stunted

by the colossal burdens imposed because of the failure of this generation to prepare for those of the future.

HISTORICAL FLASHBACK

Births, deaths and migrations have set the pace of population growth over the ages. In underdeveloped countries where birth rates remain high, the rapidly falling death rates causes the current alarming speed-up in growth rates.

Much of the Western world, on the other hand, has gone through the "demographic transition" since 1800. Death rates are now very low and are not likely to decline much in the future. Thus, the rate of growth is determined mainly by the birth rate. Except in Australia, Canada, New Zealand and a few other countries, international migration is no longer a significant factor in population growth.

In the United States, economic and social conditions are the most powerful forces causing birth-rate fluctuations. They influence the age when young people marry. Through family planning, they affect family size and the timing of births. The depression of the 1930's brought a record low birth rate, and postwar prosperity helped to produce the prolonged baby boom.

The transition to a lower birth rate in this country has continued for more than a century with the diffusion of birth-control knowledge. The crude birth rate fell from about 55 during 1798-1802 to 18 during 1928-1932. It started to rise again during World War II, reaching a postwar high of 26.6 in 1947; and it leveled off at about 25 during the prosperous 1950's.

It has been estimated that in colonial times, white married women who lived to middle age averaged about eight children. According to Census Bureau statistics, the American family has grown smaller slowly but steadily for more than a century. White women who were middle aged in 1910 and had ever married had borne 4.6 children each. In 1940, such women averaged 3.0 children. Women who were in their prime reproductive years in the depression of the 1930's and who reached the end of their childbearing period in 1955 averaged only 2.4 children—an historical low.

Women who will reach middle age in 1960 are expected to tie that record.

THE "GAF" STUDY

Because family planning is the major means by which the United States birth rate is controlled, much more information is needed concerning its acceptance and use. To explore this, the Scripps Foundation for Research in Population Problems of Miami University and the Survey Research Center of the University of Michigan conducted a national study. It was designed to discover how married couples feel about family planning, how extensively they accept and practice it, and how successful they are in keeping actual family size in line with expectations. Known to population experts as "GAF" (Growth of American Families), the study as reported in the volume previously noted constitutes a major con-

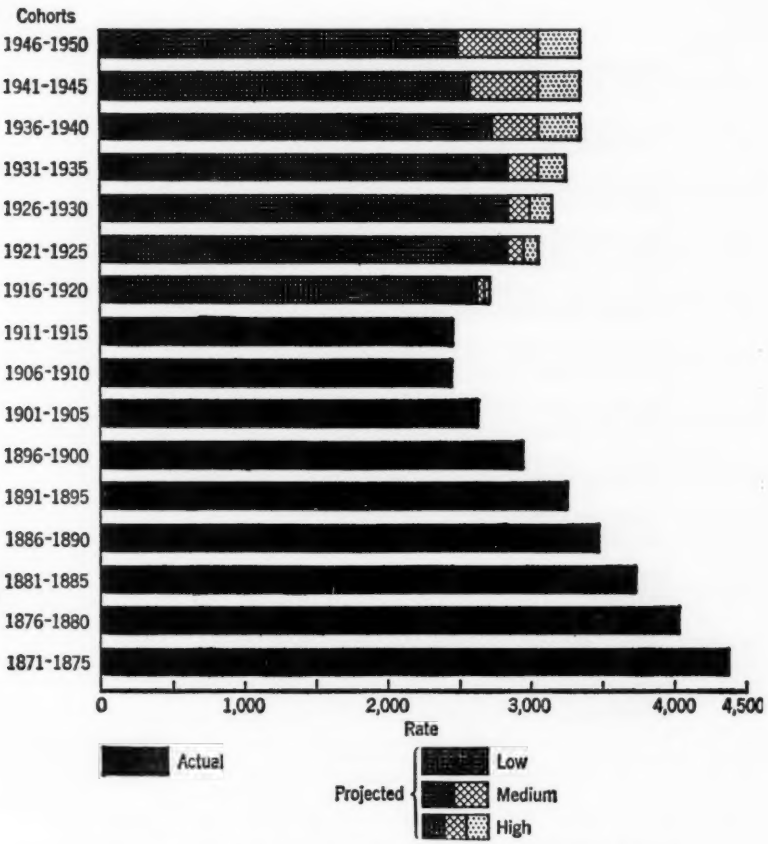

FIGURE 2: PAST AND FUTURE BIRTH RATES OF AMERICAN WOMEN

Actual, expected and medium, low, and high projected final birth rates, for all ever-married women living to middle age, by groups of cohorts. The rates show total births per 1,000 ever-married women. The rates for pre-1915 cohorts are actual. The low, medium and high rates for later cohorts are based on the "GAF" sample. The cohorts born in 1931-35 expect to have 25 percent more children than their mothers, but not as many as their grandmothers.

tribution to demographic knowledge. Unfortunately, space limits this discussion to only a few of the findings of the study.

According to Freedman, Whelpton and Campbell:

> . . . 2,713 white wives in the principal childbearing years (18 to 39) were interviewed at length. They gave detailed information on their pregnancy histories, contraceptive practices, and their plans for future childbearing. The wives were selected on a probability basis to give a

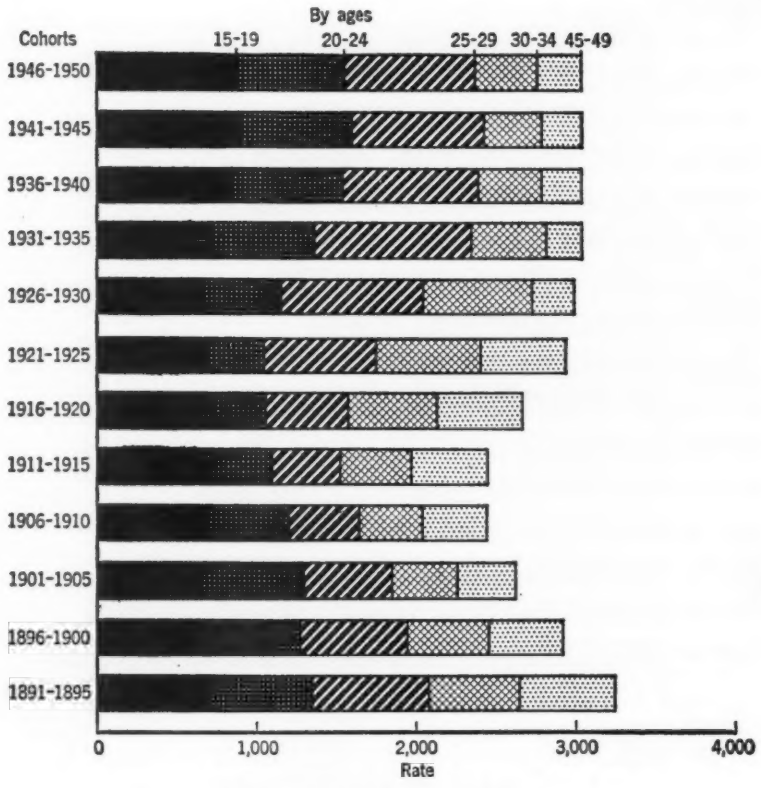

FIGURE 3: THE TIMING OF BIRTHS

Actual, expected, and medium projected *cumulative* birth rates by ages from 15-19 to 45-49, for all ever-married women, by groups of cohorts. The wives in the cohorts of 1931-35 expect to have their children at earlier ages than their mothers or grandmothers.

good representation of the approximately 17 million white married couples in our population with wives 18 to 39 years old in the spring of 1955.

We secured complete interviews from 91 per cent of the sample, indicating that family planning is now accepted by young married people as a topic for discussion and investigation. In most surveys on political and economic subjects the completion of interviews from 85 per cent of the sample is considered satisfactory. Fewer than four wives in 1,000 declined to answer questions about the method of contraception they practiced. In contrast, a larger number refused to answer questions about family income . . .

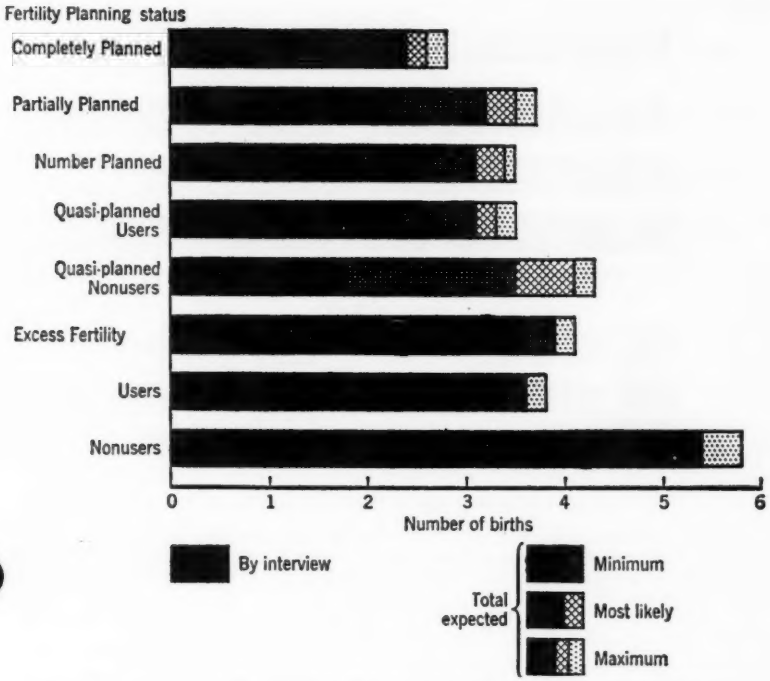

FIGURE 4: COMPLETED FAMILY SIZE RELATED TO THE PLANNING OF CHILDBEARING

Average number of births by time of interview in 1955, and total number expected, for fecund couples by fertility planning status, defined below. Most likely and maximum are the same for Excess Fertility couples.

Number planned: Couples whose last pregnancy (but not all previous pregnancies) occurred when contraception was stopped in order to have a child.

Quasi-planned: Couples whose last pregnancy was wanted sooner or later but was not planned by stopping contraception. Some of these couples had not yet begun contraception.

Excess fertility: Couples whose most recent pregnancy was unwanted by wife, husband, or both.

The wives were classified on a "birth cohort" basis, i.e., according to the year of their birth, providing a convenient designation that does not change from one year to the next, as does age identification. For the purpose of this study, cohorts were grouped by five-year intervals. P. K. Whelpton has pioneered the effective application of cohort fertility analysis.

The size of the expected family varied with the age of the women queried: the younger they were, the

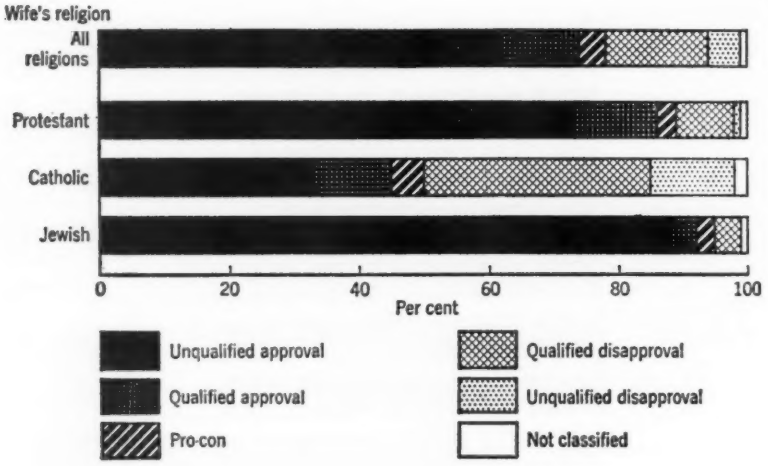

FIGURE 5: ATTITUDES TOWARD FAMILY PLANNING

Percent distribution by attitude toward family limitation, for all wives, by wife's religion. Religious differences exist in attitudes about controlling family size. Jewish wives express greatest approval, Protestant wives follow closely, and Catholic wives express greatest disapproval.

higher their expectations. This may indicate a change in attitude concerning family size or it may be a bias of the data. The younger cohorts will in time include other women who will marry late and reduce the expected family size. In short, the differences found in 1955 between the expectations of the younger and the older cohorts may be to a considerable extent due to the fact that the late-marrying wives are in the older cohorts but not in the younger ones.

In discussing the cohort fertility concept, the authors state that the use of cohorts is especially helpful and important in connection with fertility forecasts:

> . . . By focusing attention on the childbearing of real groups of people as they live through the reproductive ages, *statements can be made which are understandable in terms of the behavior of individuals and married couples.* For example, one can readily comprehend what is meant by the assumption that 95 per cent of the women born in 1931-35 and living to age 45 will have married before age 45, and that the average number of births to those who marry will be 3. In contrast, *it is difficult to interpret in terms of the behavior of individuals or married couples* the assumptions that during 1956-65 the birth rate will remain at 24 per 1,000 (the 1955 figure) and that it will then decline to 20 per 1,000 in 1980. [Italics supplied.]

This cohort approach concentrates attention on the fertility of actual groups of women during

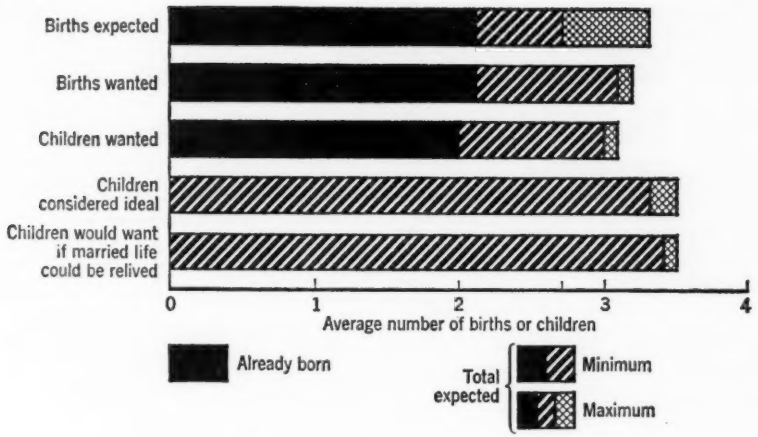

FIGURE 6: ATTITUDES TOWARD FAMILY SIZE

Average number of births wife expects and wants, and average number of children wife wants and considers ideal. Wives generally expected and wanted fewer children than they considered "ideal," or than they would want if married life could begin all over again.

successive ages, on their cumulative fertility, and on final family size.

THE PLANNED FAMILY

In general, the study revealed that a majority of couples in nearly all groups within the population accept the concept of family planning, and try to regulate the number and timing of births "in relation to their needs and resources." Among the fecund couples, 83 percent practice contraception and 7 percent more expect to do so after having the children they want. The proportion might even exceed 90 percent because many couples who do not expect to regulate the size of their families will decide to do so as they are confronted with the realities of raising and educating children.

When analyzed according to religion, there were some interesting differences in attitudes toward family planning. Among Roman Catholic wives, 33 percent approved completely and only 13 percent expressed unqualified disapproval. A much higher proportion of both Protestant and Jewish wives approved completely: 72 percent and 88 percent, respectively.

While the Roman Catholic dissenters reflect the traditional position of that church concerning "artificial" birth control and the extent to which the accepted rhythm method may be used, the proportion expressing unqualified disapproval of family planning is not as large as might be expected.

Many couples begin to regulate

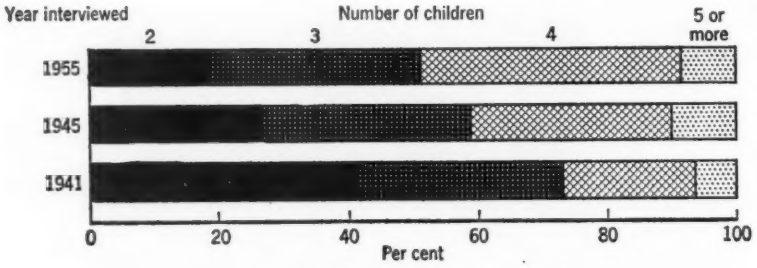

FIGURE 7: CHANGING FAMILY SIZE IDEALS

Percent distribution of wives by number of children considered ideal: 1941. 1945, and 1955. The four-child family has replaced the two-child family as the most popular "ideal" size. However, the general "ideal" is still two to four children.

births only after they have one child or more. Among the couples who had practiced contraception, about half had at least one child before control methods were used. Among fecund couples with two children, 89 percent used contraception to regulate family size or to space pregnancies.

Couples with the least education are more likely than others to delay using contraception until pressed by necessity. The majority of couples who never use contraception suffer some physical impairment on the part of the husband or wife that limits their ability to have children. Usually the impairments are discovered only after they have failed to reproduce.

TWO TO FOUR CHILDREN "THE IDEAL FAMILY"

The wives queried report that they expect to have between 2.7 and 3.3 children, with 3.0 the most likely number. The expectations of 74 percent of the wives reveal that the most widely accepted family includes two, three or four children.

To match the 3.2 "most likely" number of children expected by wives in the cohort born during 1931-37, it is necessary to go back two generations — to the women born during 1886-90. Should the birth expectations of the young wives materialize, the average size of completed family will increase substantially from the recent low.

This does not mean that the large family of yesteryear is on its way back. The proportion of families with seven or more children has decreased steadily. In 1920, 20.5 percent of white ever-married women who were 45 to 49 years old had borne seven or more children; in 1955, only 5.4 per cent. The trend away from the large family has gone on for generations and may continue.

A notable exception is found among the Hutterites, a relatively

small agrarian, religious sect with communal settlements in the Dakotas, Montana and in Canada. Famous for high fertility, the Hutterites may be the most prolific people in the United States today—perhaps in the world. In 1950, among 340 completed Hutterite families in the United States, the median number of children was nine.

During the decade 1941-50, the Hutterite birth rate was 45.9, the death rate was 4.4, and the rate of natural increase was 41.5. At that rate of growth, the Hutterites will double their numbers in only 16 years. They are out-multiplying by far all other rapidly growing peoples of the world. Readers are referred to the December 1954 issue of the *Bulletin* for a detailed discussion of the Hutterites in the United States.

TABLE I: AVERAGE NUMBER OF CHILDREN EXPECTED BY WIVES

Wife's Year of Birth (cohort)	Minimum	Most Likely	Maximum
Total number of children expected:			
1931-37	2.8	3.2	3.4
1926-30	2.8	3.1	3.4
1921-25	2.7	3.0	3.3
1916-20	2.7	2.9	3.0
Actual number of children born:			
1911-15		2.4*	
1906-10		2.4*	
1886-90		3.2	
1871-75		4.0	

*Partially estimated.

EDUCATION STILL A MAJOR DIFFERENTIAL FACTOR

Urbanization, mass education and physical, social and economic mobility all tend to develop standardization in attitudes and practices the world over. In the Western industrial nations, this is reflected in the widespread acceptance of the small-family pattern and the general diffusion of contraception knowledge and practice.

However, interesting differences in family size do exist in this country. Educational achievement has been one of the major factors shaping these differences ever since birth control knowledge and practice began to lower the birth rate more than a century ago.

At first, only the highly educated, wealthy people had ready access to contraceptives. Gradually, these came within the reach of larger segments of the population. Now, lack of contraceptive knowledge and high birth rates go hand in hand with little education. Understandably, people who have not gone beyond grade school are apt to know less about regulating births than graduates of grade school, high school and college.

Since 1940, the birth rate of college graduates has increased considerably. This is confirmed by the annual College Study conducted by the Population Reference Bureau from 1946 to 1956 to measure current and completed fertility. In the 11-year period, a total of 153,596 graduates from 1,596 colleges reported the number of their children. Detailed reports of the sur-

veys for 1954, 1955 and 1956 appear in separate *Bulletins*. Generally speaking:

> The Study confirmed the downward trend in college graduate fertility during the 1920's and early 1930's; it pinpointed the turning point; and it plotted the upturn which began in the late 1930's and greatly accelerated after the mid-1940's . . .

Commenting on this trend, the *Bulletin* stated:

> . . . The competence of future generations of Americans depends, in large part, on the more gifted citizens at least replacing themselves in the population.
>
> Eugenically, this trend is important because it at least temporarily reduces the very sharp differential birth rate of earlier years. Many earlier surveys had revealed that the citizens of tomorrow were being born in disproportionate number to that part of the population which had not overtly demonstrated any particular abilities to transmit to their progeny. During 1940-50, fertility increases were greatest among people in the higher socio-economic brackets.
>
> This does not mean that the differential has been eliminated. A sample survey made by the Bureau of the Census in 1957 indicated that it still persists and may again be increasing as the less educated continue to have higher birth rates.

FACTORS DETERMINING FAMILY SIZE

The GAF study reveals that education and religion are the major factors shaping the birth expectations of the wives queried. Whether or not the wives live on farms is another important influence. Working wives, especially those in their late thirties who have worked five years or more, expect to have fewer children than most of the other wives. However, it should be remembered that many wives work *because they cannot have children.* Income and husband's occupation, both important differential factors a few decades ago, no longer seem to make much difference in birth expectations. Recent census statistics tend to confirm this.

Taking the group of white wives as a whole, Roman Catholic wives living on farms topped the expectation-scale with 4.4 children. Catholic college graduates expect 3.9 children and tied for second place with all grade school wives whose husbands earned less than $3,000 per year. At the very bottom of the scale were Jewish wives born between 1916-20 who expect only 1.8 births. Slightly above them were wives 35 to 39 years old who had worked five or more years after marrying. They expect 2.1 births.

RELIGION

The GAF study reveals interesting birth-expectation differentials on the basis of religion. Roman Catholic wives expect the largest number of children, 3.4; Jewish wives the smallest, 2.4; and Protestant wives expect 2.9. As educational achievement increases, the differential between Catholic and Protestant widens:

	Protestant	Catholic
College	2.7	3.9
High School Graduates	2.7	3.9
High School (1-3 years)	2.9	3.1
Grade School	3.6	3.7

The fact that Roman Catholic women within virtually all of the socio-economic groups consistently reported higher birth-expectations

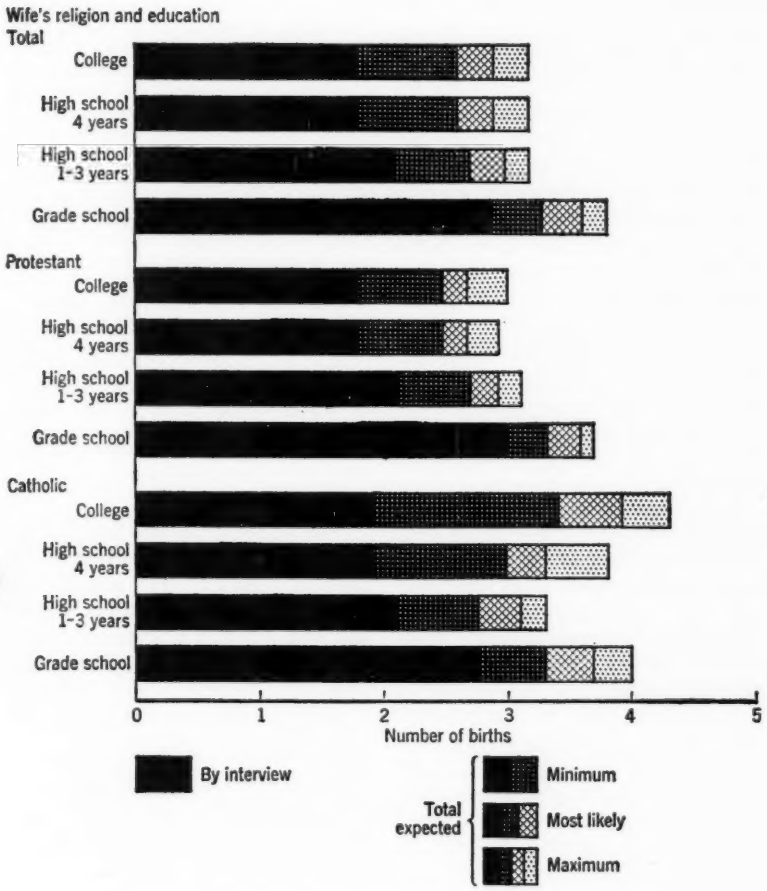

FIGURE 8: RELIGION, EDUCATION AND EXPECTED FAMILY SIZE

Average number of births by 1955, and total number expected, for wives, by education, by religion. Educational and religious differentials exist. One of the most striking findings in the study is that Catholic college women expected *more* children than those with only grade school or high school education.

than Protestant women indicates that religious birth-expectation differences cannot be explained by variations in educational achievement, income or residence.

Both the Catholic and Protestant wives had borne an equal number of children (2.1) at the time the

study was conducted. This similarity was found among wives of various ages, including the 35- to 39-year-olds whose families were almost completed. The Catholic wives had no more children than the Protestants primarily because they were slightly older—an average of 1.5 years older—at the time of marriage. Thus they had fewer years in marriage to bear children. But when Protestant and Catholic wives in the same cohort who were married at the same age were compared, the Catholic women consistently had higher fertility. When wives were grouped by duration of marriage, the same differences were revealed.

In view of the reports of the older Catholic women, it is likely that the younger Catholic wives will reduce their expectations as they have more experience with bearing and raising children. Catholic women aged 35 to 39, for example, said that they wanted 3.5 children when they were married, but only 3.1 at the time of the interview. In contrast, Protestant women 35 to 39 years old wanted 2.9 children when they were married and again at the time of the interview. Commenting on this, the authors state:

The decline in the number of children wanted by the Catholics in the course of married life may help to account for the age differences in their expectations. The oldest Catholics interviewed (1916-20 cohorts) expect to have a final average of 3.1 births, as compared with 3.8 births for the latest cohorts (1931-37). The average number of births expected by the Protestant wives in the different cohorts, on the other hand, varies within a relatively narrow range—between 2.8 and 3.0. If the expectations of both Catholics and Protestants are considered to be equally good indices of future reproductive behavior, then the different cohort trends in expected births suggest that the Catholic-Protestant fertility differentials will widen. However, it seems more likely, in view of the reports of the older Catholic women, that the expectations of the younger Catholics will be reduced as they have more experience with bearing and raising children.

The single exception to the general rule that Catholics expect more children than Protestants and Jews is the group of fecund Catholic working wives in their thirties who have worked over five years. Their birth-expectations equal those of their Protestant counterparts, 2.5 children.

THE WORKING WIFE

Employment is the "fertility leveler," no matter what the working wife's education, religion or in-

TABLE II: AVERAGE NUMBER OF BIRTHS EXPECTED FOR ALL WIVES, BY AGE AND BY WORKING EXPERIENCE

Working Experience	Total Wives	Wives Aged			
		18-24	25-29	30-34	35-39
		Most likely expected total births			
Never worked	3.5	3.2	3.6	3.4	3.6
Less than 1 year	3.2	3.1	3.1	3.3	3.3
1-4.9 years	3.0	3.1	3.0	2.9	2.8
5 years or more	2.1	—	2.2	2.2	2.1
TOTAL	3.0	3.2	3.1	3.0	2.9

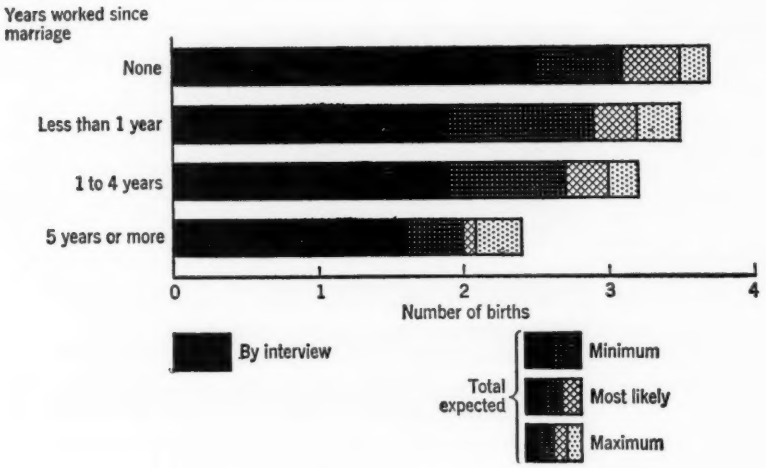

FIGURE 9: WORK EXPERIENCE AND EXPECTED FAMILY SIZE

Average number of births by 1955, and total number expected, for wives, by years worked since marriage. The inverse relationship between work experience and expected number of children is clear.

come. The longer she had worked, the lower her birth expectations, and vice versa.

Commenting on the changing role of women in the economic system of a society which moves from an agrarian subsistence economy to an industrial economy, Jeanne Clare Ridley of Vanderbilt University states:

. . . The role of the woman has been perhaps more deeply affected by the Industrial Revolution than that of the man. In the subsistence economy the woman was part of the economic system. She possibly contributed as much as did her husband to the earning of a livelihood of the family. Her economic role and mother role complemented each other since they both were confined to the home. With the shift of work from the home, woman's economic role tended to disappear and the mother role tended to become predominant.

More recently other factors have contributed to the woman resuming her economic role in society, at least partially. One significant factor has been the increasing life expectancy which has meant that a smaller proportion of the woman's life after marriage is devoted to the child-rearing function. Also, the increased educational and employment opportunities for women and their general "emancipation" have enabled more and more women to spend at least some time in the occupational world before marriage. Thus when a woman enters marriage she is likely to have had a taste of what gainful employment is like and, more important, a feeling of financial independence and responsibility.

Further, the introduction of labor saving devices has been significant in that housekeeping is no longer the time consuming and arduous task that it once was. The amount of time required for

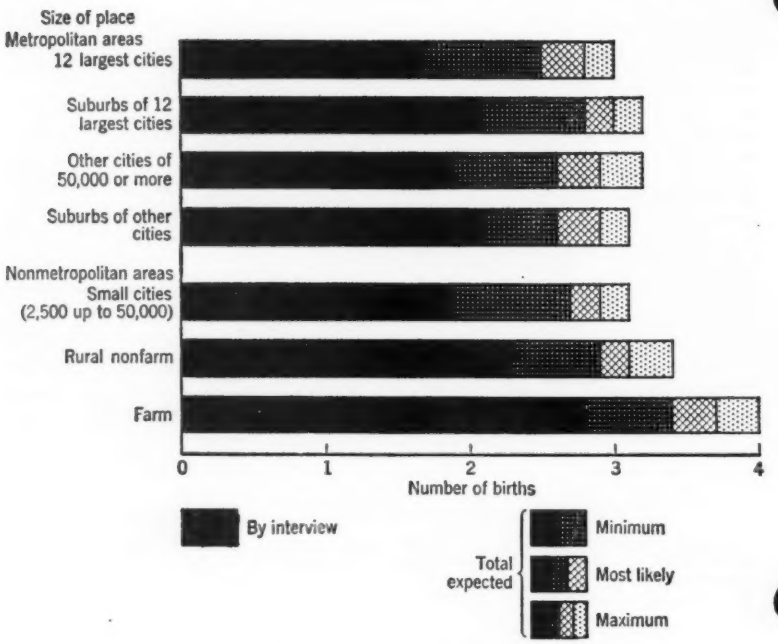

FIGURE 10: RESIDENCE AND EXPECTED FAMILY SIZE

Average number of births by 1955, and total number expected, for wives, by size of place of present residence. The farm-nonfarm differential persists, but the authors felt that this is related partly to education. The gap between the rural nonfarm and the urban groups has narrowed.

"keeping house" is much less for the average woman today than it was for her grandmother, or even her mother. Thus the amount of leisure time available for non-familial activities has increased.

* * *

In fact census data for the United States and Western European countries have long indicated that among married women an inverse relationship exists between labor force participation and family size. All these analyses tend to have one common limitation. Although all of them point to an inverse relationship between size of family and labor force participation, it is impossible to come to any conclusion as to the direction of causality. In the first place, it is difficult to decide whether the high incidence of childlessness is due to the tendency for wives to work if they cannot bear children or to the deliberate avoidance of having children by wives who prefer to work. Nor, likewise, is it possible to decide whether families are smaller because wives desire to be employed or whether they are employed because their families are smaller. Doubtless the cause-effect relationships run in both directions.

OTHER DIFFERENTIAL FACTORS

Residence no longer is an important factor in birth expectation differentials except for the farm-non-

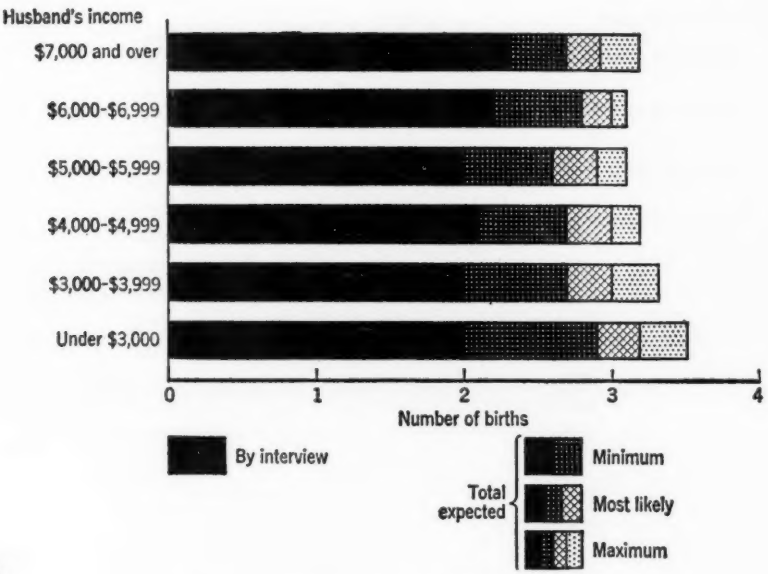

FIGURE 11: INCOME AND EXPECTED FAMILY SIZE

Average number of births by 1955, and total number expected for wives, by husband's income. Income is no longer a major factor determining family size. The differentials found were relatively small and inconsistent.

farm difference. In general, wives living on farms expect larger families than other wives, 3.7 and 2.9 children, respectively. The rural nonfarm vs. town and city difference is relatively small; the former expect 3.1 children.

Nor are income and occupation now as important in determining expected family size as they once were. Differentials exist, but they are small compared with religious and educational differences. Moreover, the authors associated the farm-nonfarm differential with educational factors. The younger the wives the smaller the difference by occupational grouping. However, wives of farmers and farm workers tend to have higher expectations than other wives.

FUTURE POPULATION GROWTH

Taking the Census Bureau's population for 1950, the GAF study adjusted for under-enumeration and incorrect reporting of age and then updated it to 1955. From this base, population growth and age structure were projected.

According to the GAF projections, the population of the United States could vary from 215 million to 262 million by 1980, depending

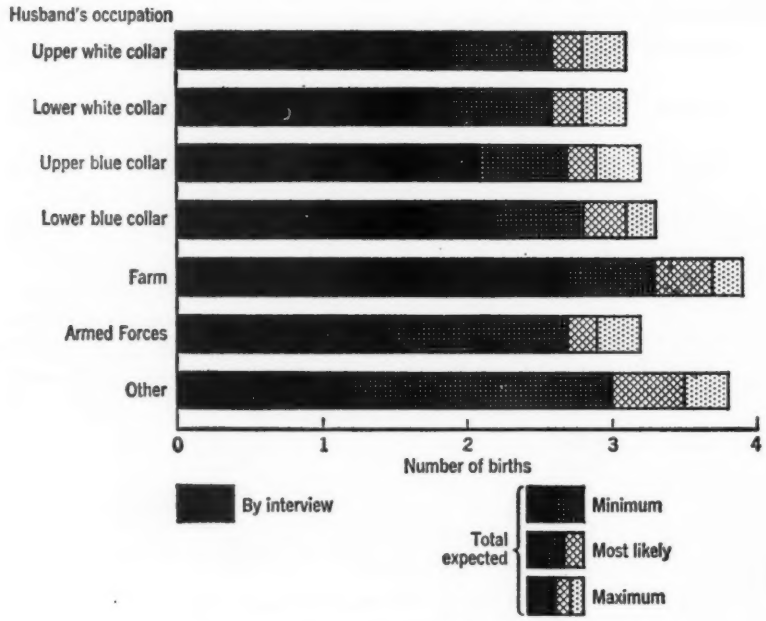

FIGURE 12: HUSBAND'S OCCUPATION AND EXPECTED FAMILY SIZE

Average number of births by 1955, and total number expected, for wives, by husband's occupation. Traditional occupational differences in fertility seem to be disappearing. However, wives of farmers and farm workers expect more children than other wives.

upon low and high assumptions of fertility. Population could double in the last half of this century, and reach more than 600 million in 2050, if the medium fertility forecasts are realized. These assume an average of three children per married woman. The low projection (children declining to 2.5 for the 1946-50 cohorts) and the high projection (births per woman rising to 3.3 for the same cohorts) were carried out only to 1980. All three projections are based on clearly drawn assumptions of fertility, mortality and immigration trends.

In contrast, most recent projections released by the Census Bureau anticipate from 231 million to 273 million people by 1980. Readers are referred to the May 1959 *Bulletin* for complete information about Census Bureau projections and assumptions governing those projections.

FUTURE AGE STRUCTURE

As shown in the age pyramid from the GAF study, three possible age structures are projected and these are based on low, medium and

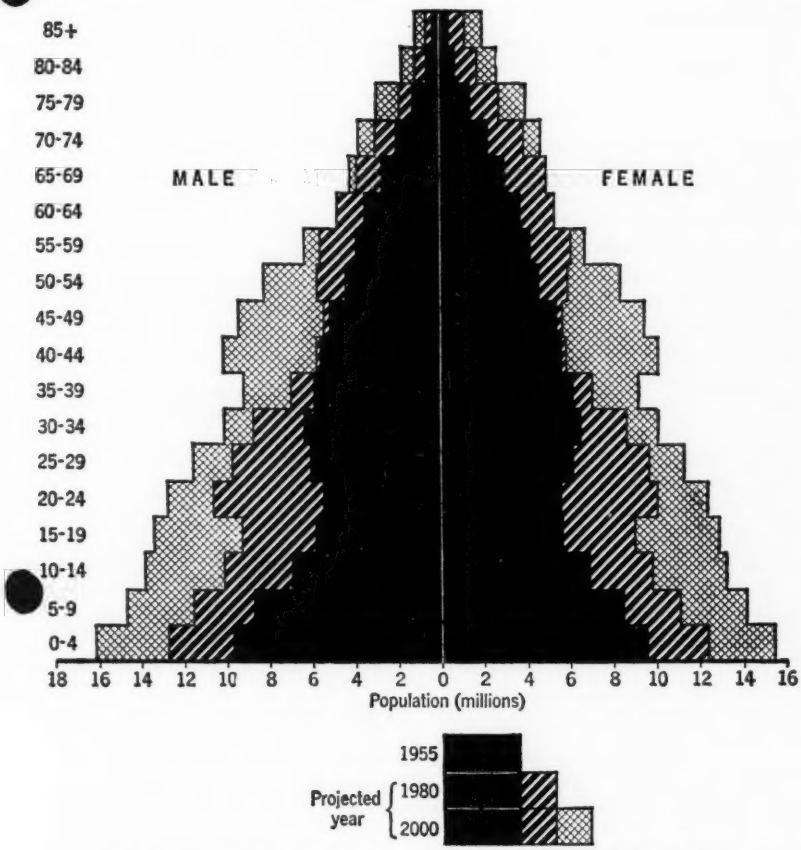

FIGURE 13: AGE PROFILE OF U. S. POPULATION, 1955, 1980, AND 2000.

Population, by age and sex: actual in 1955 and projected (medium series) in 1980 and 2000. The "waist" of the 1955 profile centering in the 20-24-year age group was caused by the low fertility of the 1930 depression years. It moves up to ages 45-49 in the 1980 profile. The "waist" in this profile at ages 15-19 reflects the smaller numbers of births expected during 1960-64.

high population growth projections.

Examining the age structure which corresponds to medium growth, the most startling increases are found among the college age group (18 to 21 years) and the group 65 years and over. Substantial increases are found for all others.

Summarizing briefly, and starting with 1960 as a base, children under six years old will increase more than one-fifth by 1980 and

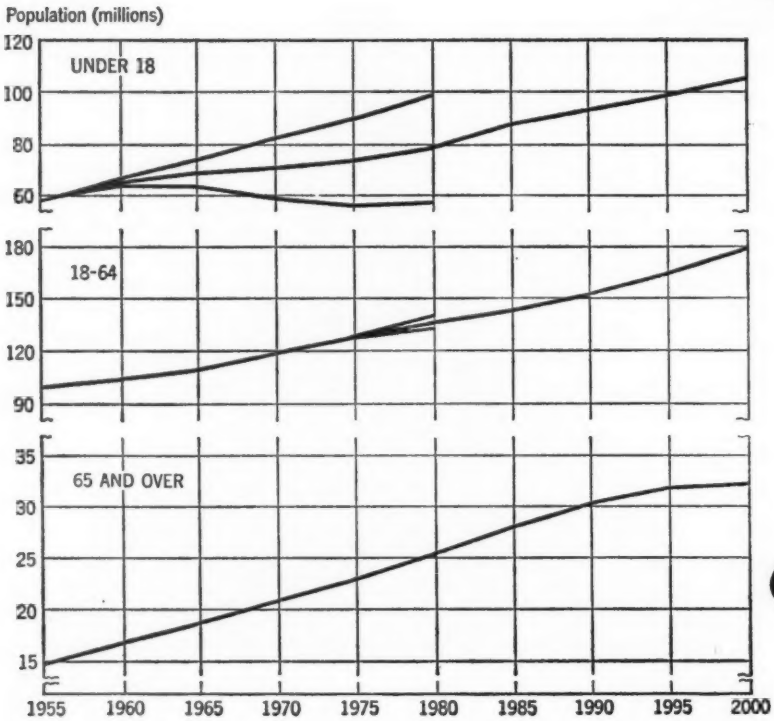

FIGURE 14: THE FUTURE POPULATION BY BROAD AGE GROUPS

High, medium, and low projected population, by broad age groups, 1955 to 2000. The number of people 65 years and older is expected to nearly double between 1960 and 2000. This is a greater proportionate increase than that anticipated for the other two broad age groups, 18-64 and under 18. The fastest growing sub-group, not shown separately here, is the 18-21-year group. This will more than double in size if the medium forecast is fulfilled.

more than one-half by 2000. Children six to 13 years will increase 17 percent by 1980 and 53 percent by 2000.

The fastest growing group in our population will be the 18-21 year olds. This group will increase 55 percent by 1980 and 108 percent by 2000!

The labor force group, people 18 to 64 years old, will increase 32 percent by 1980 and 72 percent by 2000.

The aged, people 65 years and over, will increase 50 percent by 1980 and by 2000 will nearly double in size.

Despite these different rates of

growth for the various age groups, the broader age groups (i.e. under 18, 18 to 64, and 65 and over) will not change radically, proportionwise, during the last half of the century. According to the medium projection, the proportion of young persons under 18 will vary between 33 and 35 percent of the total population, those in the productive ages, 18 to 64, will vary between 55 and 57 percent, and those aged 65 and over will rise slightly to 10 or 11 percent.

WHAT KIND OF LIFE FOR OUR CHILDREN?

From the time this nation was carved out of the wilderness until fairly recently, our rapidly growing population has been an even greater asset than our resources which, until recently, were thought to be "inexhaustible." The turning point for both could have come at the beginning of the century, or a decade or so later.

The nation's critical resource situation was explored in 1952 by the President's Materials Policy Commission. The Commission's five-volume Report warned that many resources were already depleted, and that consumption rates could threaten the nation's survival. The Report was discussed in two issues of the *Population Bulletin* published in 1953.

TABLE III: AGE DISTRIBUTION: GAF PROJECTIONS, 1960-2000

	1960	1980	2000
		Medium	Medium
Under 18	35	33	33
18-64	56	57	57
65 & over	9	10	10
Total	100	100	100

The National Resources Committee, appointed by President Franklin D. Roosevelt, explored some of the major problems of the nation's human resources. Understandably, the Committee's Report, *The Problems of a Changing Population,* reflected the demographic trends and thinking of the period when the nation was emerging from the severest depression in its history and when the birth rate was at a record low: ". . . On the assumption of medium fertility and mortality rates, population will continue to grow for 50 years but at a constantly decreasing rate, reaching 153,000,000 in 1980 . . ."

In 1938, when the Report was written, there were only about 130 million people in the United States. By 1958, the population was 174 million—44 million people had been added in only 20 years. Now, the Census Bureau estimates that there will be between 231 and 273 million people in the United States by 1980. According to the GAF study, the population of this country could be 600 million by the year 2050, coming close in numbers to China's population today.

The year 2050 is not as far in the future as the Civil War is in the past. What kind of life would a population of 600 million mean for our children's children? How can the nation accommodate such rapid growth in store even during the next two or three decades when it has not yet caught up with the needs of its present rapidly growing numbers? As long as people

continue to want three, four and more children, population will continue to grow. Is the time soon coming when steps should be taken to change attitudes concerning family size? Or, must the nation rely on serious depressions or other catastrophes to check population growth?

What is this country's optimum population? Is it not time that a permanent population commission be set up within the government to explore this, to examine ever-changing population trends and to advise policy-makers concerning the economic and social implications of population growth?

If government is slow to respond to this obvious need, should not a nongovernmental commission be established, a commission comprised of people who possess the best brains and wisdom available to survey the problem and make recommendations?

The question of what constitutes an optimum population for the United States might be as important to the nation's survival as an arsenal of weapons. Yet it has never been adequately explored. Unless our myopic vision in this area is cured, future generations might be subjected to living levels not unlike those which keep well over half of the world's people at or near the subsistence level.

—ROBERT C. COOK, *Editor*

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HIGHER EDUCATION FOR WOMEN AND EARLY MARRIAGE

On the occasion of his inauguration as President of Smith College on October 15, 1959, Thomas Corwin Mendenhall delivered an inspiring address concerning the problems and challenges of education, particularly higher education for women. Space limitation permits only brief excerpts.

. . . In particular, higher education for women contains some very dangerous mantraps for the historian-turned-prophet. The two elementary co-ordinates in history are space and time. That the former is shrinking before our eyes has become common-place. That the latter has accelerated the pace of its operation on human affairs is less thoroughly appreciated. For instance, a widely used image to describe the incredible growth of science in modern times is that ninety per cent of the scientists (in the proper, mature sense of the word) who have ever lived are alive at this moment. Less widely appreciated is the fact that higher education for women finds itself in very much the same situation. Since it began in a formal sense a bare century ago and has expanded ever since at such a remarkable rate, I think I might confidently assert that ninety per cent of the women, in this country and in the world, who have ever had the opportunity to attend college, are still alive today. Only by comprehending all the implications of this statement can we begin, in my opinion, to understand the present state of higher education for women, much less speculate about its future.

* * *

There is no single or simple explanation why higher education for women, together with the realization of equality of other opportunities, has yet to achieve the hoped-for millennium. First, let us recognize in general that the realities of equality for women are still far from coinciding with the law of the ideal. This is just another segment of our national life where much remains to be done. Again, with women as with men, a wasteful confusion prevails over the purpose of a college education. With too many young women, as Premier Khrushchev so astutely observed recently to a group of them, the first purpose of college is finding a husband. While any of us would welcome a happy marriage as a by-product of college education, to make it a first purpose is as wasteful of the precious resources of a college as it is dangerous to the good health of the values for which the college stands. With young men an excessive concern for vocationalism sometimes blurs their true appreciation of the liberal arts as a means to education. Far be it from me to deny that marriage must properly represent an ultimate vocation for the great majority of women students, or even that their education, as I shall argue in a moment, should not in fact prepare them for this blessed state. Yet this future vocation need not—given longevity today—and should not be rushed into precipitately, throwing away education "half-used" in Jacques Barzun's phrase and ignoring that "higher education is a privilege the acceptance of which binds the taker."

The fact that so many young women mistreat their obligations by confusing going-to-college with finding-a-husband can produce an atmosphere on the campus of a women's college which seriously befogs its immediate educational purpose as well as obscures the ultimate goal of women's education. If undergraduate women are too preoccupied with catching a mate, they may instinctively flinch and draw back at a critical moment in their education when they have the first opportunity to exercise their newly-acquired intellectual competence and even strike out for themselves into creative scholarship. The prevailing mania for the early marriage thus produces a false sense of values, reflected both in the hesitancy of women to push on for higher degrees and even in their reluctance, in college and much later, to make the decisions or take the responsibilities which should in fact be one of the first products of their education.

(The research report for this *Bulletin* was prepared by Selma R. Rein. The *Bulletin* was written by Annabelle Desmond.)

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